

## **Financial Plan**

### **Introduction**

Federal regulations require a financial plan as an MPO Long Range Plan element. The purpose is to demonstrate that proposed investments are reasonable in the context of reasonably anticipated future revenues over the life of the plan and for future network years (2004, 2014, 2020, and 2030). Meeting this test is called “fiscal constraint.”

The 2030 Long Range Transportation Plan is fiscally constrained. The transportation investments proposed to meet metropolitan transportation needs over the next 25 years are consistent with revenue forecasts. The Financial Plan details both proposed investments and revenue forecasts over the life of the plan.

The proposed investments were developed by the Greensboro Urban Area MPO in cooperation with NCDOT, GTA, and PART. These investments include roadway, rail, transit, bicycle, and pedestrian facilities and services for the life of this plan. They reflect existing and committed projects, the Transportation Improvement Program, the City Capital Improvement Programs, and the future plans of the MPO, NCDOT, the City of Greensboro, GTA, and PART. They also reflect needs analysis conducted for the plan including the Thoroughfare Plan Update, an extensive inter-agency and interdepartmental staff review, and the results of three rounds of public input in plan development. Roadway maintenance and transit operating and maintenance costs were forecasted as discussed below.

Revenue forecasts were developed after a review of previous state and local expenditures, current funding trends, and likely future funding levels. The revenue forecasts involved consultation with NCDOT, GTA, and PART. All dollar figures discussed in this section were analyzed in current year dollars. Figures are presented in constant dollars so that they will be fully comparable through time against a constant baseline value (the current year dollar).

This chapter provides an overview of the forecasted cost and revenue assumptions, along with the detailed research results used to derive these values.

### **Financial Plan Overview**

**Tables 12.1 and 12.2** show the forecasted cost and revenue for the Greensboro Urban Area 2030 Transportation Plan.

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**Table 12.1 — Greensboro Urban Area 2030 Transportation Plan Revenue Forecast Summary**

All Amounts in Thousands of Dollars								
Begin Fiscal Year	TIP Revenues		State	Local Revenues				Totals
Period	Highway	Transit	Maintenance	CIP	GTA	Powell Bill	Bonds	
2004	93,810	11,320	20,830	10,300	7,210	5,500	7,990	156,960
2005-2014	752,460	127,900	275,100	90,520	102,710	57,910	55,190	1,461,790
2015-2020	375,690	113,220	242,330	51,460	86,120	37,410	0	906,230
2021-2030	484,880	127,060	600,520	94,650	180,010	67,120	0	1,554,230
<b>Totals</b>	<b>1,706,840</b>	<b>379,500</b>	<b>1,138,780</b>	<b>246,930</b>	<b>376,050</b>	<b>167,940</b>	<b>63,180</b>	<b>4,079,210</b>

- CIP = Capital Improvement Program
- GTA = Greensboro Transit Authority
- Bond funds include roadway, public transportation, and pedestrian and bicycle projects
- Bond program set to end in 2010; no additional bond referendums are assumed for 2020 and 2030
- Highway TIP revenues represent highway, rail, bicycle, pedestrian, and non-capacity adding roadway improvement projects

**Table 12.2 — Greensboro Urban Area 2030 Transportation Plan Cost Summary**

All Costs in Thousands of Dollars							
Begin Fiscal Year	Capital			Operating & Maintenance			Totals
Period	Highway	Transit	Non-Motorized	State Roads	Local Roads	Transit	
2004	101,800	7,960	4,800	20,830	5,500	10,570	151,460
2005-2014	805,560	95,930	42,680	275,100	57,910	134,650	1,411,840
2015-2020	351,630	45,120	26,780	242,330	37,410	154,080	857,360
2021-2030	389,540	15,680	40,230	600,520	67,120	279,280	1,392,360
<b>Totals</b>	<b>1,648,520</b>	<b>164,700</b>	<b>114,500</b>	<b>1,138,780</b>	<b>167,940</b>	<b>578,570</b>	<b>3,813,010</b>

Transit includes PART and GTA rubber tire bus service and PART commuter rail

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Revenues reflected under the CIP do not represent an actual surplus. This money will be fully allocated in subsequent years to local projects such as roadway and sidewalk construction and maintenance, as well as to GTA. Many of these projects are non-capacity improvement projects such as intersection improvements, bridge projects, safety enhancements, and transit operations and maintenance.

**The following tables compare costs to revenues by mode of transportation, and further document that the plan meets the fiscal constraint test.**

**Table 12.3 – Roadway Costs and Revenues**

<b>Roadway Costs and Revenues*</b>								
All Amounts in Thousands of Dollars								
Period	Capital Costs	Roadway Capital Revenues		Capital Balance	Maint.	Maintenance Revenues		Maint.
		Highway TIP	Bonds		Costs	State	Local	Balance
2004	101,800	93,810	7,990	0	26,330	20,830	5,500	0
2005- 2014	805,560	752,460	55,190	2,090	333,010	275,100	57,910	0
2015- 2020	351,630	375,690	0	24,060	279,740	242,330	37,410	0
2021- 2030	389,540	484,880	0	95,340	667,640	600,520	67,120	0
<b>Totals</b>	<b>1,648,520</b>	<b>1,706,840</b>	<b>63,180</b>	<b>121,500</b>	<b>1,306,720</b>	<b>1,138,780</b>	<b>167,940</b>	<b>0</b>

\* CIP funds are excluded from balance calculation. See note in document.

Forecasted roadway revenues exceed estimated costs throughout the duration of the plan by 6.8% of the revenue total. The TIP highway fund surplus is concentrated in the years after 2015. This reflects fewer identified roadway investments, ongoing capital investment needs, and continuing growth in the Federal and State transportation programs as described below, as well as the fact that non-capacity roadway projects are not specifically identified after 2014 (see table 12.10).

**Table 12.4 – Transit Costs and Revenues**

Transit Costs and Revenues (All Costs in Thousands of Dollars)					
Period	Costs			Revenue	Difference
	O&M	Capital	Total	Total	
2004	10,570	7,960	18,530	18,530	0
2005-2014	134,650	95,930	230,580	230,610	30
2015-2020	154,080	45,120	199,200	199,340	140
2021-2030	279,280	15,680	294,960	307,070	12,110
<b>Totals</b>	<b>578,580</b>	<b>164,690</b>	<b>743,270</b>	<b>755,550</b>	<b>12,280</b>

Transit costs and revenues cover both GTA and PART. A small surplus is indicated by the analysis. At 1.6% of total forecasted revenues, this appears to be insignificant.

**Table 12.5 – Pedestrian and Bicycle Costs and Revenues**

Pedestrian & Bicycle Costs and Revenues (All Costs in Thousands of Dollars)			
Period	Costs	Revenues	Difference
2004	4,802	4,802	0
2005-2014	42,679	42,679	0
2015-2020	26,784	26,784	0
2021-2030	40,231	40,231	0
<b>Totals</b>	<b>114,496</b>	<b>114,496</b>	<b>0</b>

Maintenance expenses accounted for under roadways.

Bicycle and pedestrian costs and revenues are balanced, reflecting the current programs of the City of Greensboro, Guilford County, and NCDOT.

The following sections provide more detailed assumptions regarding revenue, capital costs, maintenance costs, and future revenue needs. Roadway project lists by horizon year (2004, 2014, 2020, and 2030) are documented and mapped in **Tables 12.6 through 12.9** and **Maps 3.1 through 3.4**.

## **Revenue Assumptions**

### **Highway TIP Revenues**

The highway TIP revenue forecast was developed based on past, current, and expected future funding levels in collaboration with NCDOT. A key assumption is the expected growth of federal and state revenue for roadway projects in the Greensboro area. Highway, rail, safety, bridges, resurfacing, and enhancement projects listed in the TIP were considered.

In addition, federal Surface Transportation Plan Direct Apportionment (STP DA) funds were applied. These funds are directed by the MPO in consultation with NCDOT. STP DA funds are forecasted to increase at a rate of 1.5% annually, with money allocated toward highway, bicycle, pedestrian, and transit projects.

The specific assumptions for each horizon year are as follows:

**2004**—Equivalent to the cost of funded projects listed for 2004 in the 2004-2010 Metropolitan Transportation Improvement Program (MTIP).

**2005-2014**—Revenues for 2005 to 2010 are based on the projects listed in the 2004-2010 MTIP. Revenues for 2011 to 2014 are expected to grow at an annual rate of 3%, reflecting the expected vigorous construction schedules of the western and eastern portions of the urban loop, as well as general program growth.

**2015-2020**—A 1% annual growth rate is assumed throughout this period to reflect modest program expansion. A one-time 50% decrease in funds is conservatively assumed to occur in 2018 with the completion of major projects such as the Urban Loop and the US 220 / NC 68 Connector.

**2021-2030**—Program growth is forecasted to continue at 1% annually.

### **Transit TIP Revenues**

Forecasted revenues for federal and state transit funding were developed in collaboration with the Greensboro MPO, GTA, and PART. The values shown in **Table 12.1** are a combination of revenues for GTA and PART. Mobility Greensboro was used to develop the transit assumptions found in this financial plan.

Current and previous transit funding levels were studied to develop assumptions for future years. Federal, state, and local funding all were analyzed by funding type. Federal Capital and

Operating Grants were assigned a conservative growth factor of 2% annually. STP-DA funding for transit was assumed in 2005 and between 2013-2014 and 2015-2020.

PART Express bus costs and revenues were calculated based on current capital and operating costs. Fleet replacement and expansion was estimated through the 2030 horizon year based on communication with PART. Capital costs and revenues were assumed for the construction of an intermodal transportation center which will serve PART rail and express bus service.

PART rail costs and revenues were calculated for the regional commuter rail starter line from NC A&T to Hanes Mall based on the Triad Major Investment Study Preliminary Draft Report. Revenues were set to equal cost estimates and assumed to come from 25% local, 25% state, and 50% federal sources. These revenues are tallied under the Transit TIP Revenues item. These costs and revenues were then adjusted to reflect only the portion that falls in the MAB. The length of the line in this area was obtained from PART.

### **State Roadway Maintenance Revenues**

State roadway maintenance funds were forecast based on historical funding data (1990-2002) for Guilford County obtained from NCDOT Division 7. These values were converted to 2004 dollars and were then used to obtain a trend of average annual rate of increase. A 5% annual growth factor was used as a more conservative estimate from the 7% actual trend.

### **Capital Improvement Program (CIP) Funds**

As discussed previously, the City of Greensboro's Capital Improvement Program (CIP) funds are used for local projects such as roadway and sidewalk construction and maintenance. The specific funding sources considered in the CIP funds listed in **Table 12.1** are the Street and Sidewalk Revolving Fund and the State Highway Allocation Fund (not including Powell Bill revenues). Funding amounts for the past 5 years were considered for specific revenue sources, and were then projected at a conservative growth rate of 0.80% per year.

### **Local Funds**

The LRTP assumes the Mobility Greensboro 2009 service goals are implemented by 2014. This reflects the likelihood that the plan will need to be implemented over a longer time period than originally recommended in Mobility Greensboro. Significant service expansion is assumed by 2014 to facilitate the goal of doubling system ridership.

## **Greensboro Transit Authority (GTA) Funds**

Local revenue forecasts for GTA were based on continuation of current funding sources, as well as new sources proposed by the Mobility Greensboro Plan. Mobility Greensboro included a detailed analysis of service expansion needs and potential revenue sources. This provided the basis for the LRTP fiscal analysis. Mobility Greensboro funding options were selectively incorporated into the LRTP assumptions as follows

### **Mobility Greensboro Based Assumptions**

- Property tax mileage rate is increased to maximum authorized level to \$0.035 per \$100 of assessed value in FY '07
- Vehicle motor pool tax of \$10.00 is in place starting in 2010
- Full cash fare for all fare categories is increased by 25% from 2010 to 2030
- Annual ridership increases to 4.4 million as a mid-term goal

### **Current Funding Source Assumptions**

- Investment income grows by 1% per year from 2005 to 2030
- Intangibles tax revenue grows by 1% per year from 2005 to 2030
- Duke Power payment revenue grows by 1% per year from 2005 to 2030
- Other income remains constant from 2005 to 2030

## **Powell Bill Funds**

Powell Bill funds are collected by the state in the form of a gasoline tax. These funds are returned by NCDOT to eligible cities and towns for maintaining, repairing, constructing, reconstructing, or widening municipal streets. Powell Bill funds also are used for the construction and maintenance of sidewalks and bikeways located within the rights-of-way of public streets and highways. The amount of these funds distributed to a municipality is based on the number of street miles to be maintained and the City's population.

The Powell Bill funding for the planning area was reviewed for the years 1990-2003. The amounts for each of these years were converted to 2004 dollars and a trend showing the percentage of annual increase was determined. This conservative annual growth factor was applied to forecast the Powell Bill funding through

2030. The annual growth of uninflated Powell Bill funding is a result of an increase in City-maintained lane mileage.

### **Bond Funds**

The City of Greensboro has approved bond programs for transportation investments regularly since the early decades of the last century. The current Transportation Bond program provides \$74 million between 2002 and 2010 and was approved by City voters in November 2000. A little more than \$63 million of this is allocated between 2004 and 2009, to be spent on roadway system enhancements, public transportation, pedestrian and bicycle facilities, and roadway maintenance. The Bond Program was not forecasted beyond 2010 because additional study will be needed to determine the needed scope and magnitude of future bond program needs.

### **Capital Cost Assumptions**

Capital costs are separated into roadway, transit, and non-motorized (bicycle and pedestrian) modes.

### **Roadway Capital Costs**

The continued growth of population, employment, and vehicle miles of travel in the MPO area will increase the demand for additional roadway facilities. Roadway capital projects were developed and assigned to horizon years based on the current investment assumptions of the Transportation Improvement Program, various technical analyses conducted during plan development, a review of public input, and consultation with MPO agencies including NCDOT. Projects listed in the MTIP were assigned the costs listed in that document. Costs for those projects not included in the MTIP were estimated using the cost-estimation spreadsheet provided by NCDOT (included in the Technical Appendix). All roadway investments were assigned to a network year based on current status, expected project development timelines, and relative need. All project limits and descriptions have been discussed and verified with GDOT. **Tables 12.6, 12.7, 12.8, and 12.9** list the roadway projects by the horizon year in which they are projected to end construction. **Maps 3.1, 3.2, 3.3, and 3.4** in Chapter 3 display the location of projects for each horizon year.



Table 12.6 — Roadway Projects 2004 Horizon Year

2004														
ID	Funding	TIP#	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New/Revised Since Last Plan	Estimated Project Cost
A1	Local		Wendover Avenue	Big Tree Way to Stanley Rd.	0.4	4 lane	6 lane	Major Arterial	Yes	No	Yes			complete
A2	Federal	R-984	US 29	16th St. to Rockingham county line (pavement rehab)	10.9	4 lane divided	4 lane divided	Freeway/Expressway	Yes	Yes	Yes			5,936,000
A3	Federal	I-2402	Southern Urban Loop (I-85)	I-85 to Clapp Farm Rd.	14.7	N/A	6 lane freeway	Interstate	Yes	No	Yes			under cst
A4	Federal	I-2201	I-40 / US 421	Bus. 40 to W of Freeman Mill Rd.	10.9	4 lane freeway	8 lane freeway	Interstate	Yes	No	Yes			under cst
A5	Federal	P-3416	Norwalk Street Extension	Lee Street to Boston Road (rail crossing closing project)	0.3	N/A	3 lane	Local	No	No	Yes		New?	under cst
A6	Local		Spring Garden Street Median	Between Freeman Mill Rd. and Jackson St.	0.3	4 and 2 lane	Divided	Collector	No	Yes	No			450,000
Projects not completed in 2004														
B2	Local		Friendly Avenue	Westridge Rd. to Holden Rd., add medians & LT lanes (refer to 2014 for the remainder)	1.4	4 lane	4-5 lane	Minor Arterial	No	No	Yes			600,000
B3	Local		Creek Ridge Road	Randleman Rd. to US 220 (refer to 2014 for the remainder)	1.2	2 lane	3 lane	Collector	No	No	Yes			300,000
B5	Local		Elm-Eugene Street	Vandalia Rd. to Southern Urban Loop (I-85 Bypass) (right-of-way / planning only; refer to 2014 for the remainder)	1.1	2 lane	5 lane	Minor Arterial	No	No	Yes		Revised	430,000
B11	Local		Horsepen Creek - Fleming Connector	Horse Pen Creek Rd. to Fleming Rd. (includes extending existing cross-sections) (planning only; refer to 2014 for the remainder)	0.7	N/A	3 lane	Collector	No	No	Yes		Revised	100,000
B13	Federal	U-2913 (part)	Guilford College Road	Widen from Hornaday Rd. to Ruffin Rd. (refer to 2014 for more; remainder of the project is located in High Point)	1.1	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes			1,958,040
B16	Federal	U-4015 (part)	Gallimore Dairy Road	NC 68 to I-40 (not open to traffic in '05 - refer to 2014 for more; remainder of the project is located out of area)	1.0	2 lane	5 lane	Collector	No	No	Yes			1,575,000
B18	Federal	U-2524 (part)	Western Urban Loop	I-85 to Lawndale Dr. (not open to traffic in '05; refer to 2014 for the remainder)	15.0	N/A	6 lane freeway	Interstate	Yes	No				39,600,000
B19	Federal	R-2413 (part)	NC 68 / US 220 Connector	Pleasant Ridge Rd. to US 220 & widening to Rockingham Co. line (not open to traffic in '05 - refer to 2014 for more; remainder of the project is located in Rockingham Co.)	9.8	N/A	4 lane freeway	Interstate	Yes	No	Yes			8,374,000
B22	Federal	U-3612 (part)	Hilltop Road	Guilford College Rd. to Adams Farm Pkwy. (right-of-way only; refer to 2014 for the remainder)	1.0	2 lane	4-5 lane	Minor Arterial	No	No	Yes			1,057,000
B24	Federal	U-3313 (part)	Groometown Road	Wiley Davis Rd. to Wayne Rd. (right-of-way only; refer to 2014 for the remainder)	1.2	2 lane	4-5 lane	Minor Arterial	No	No	Yes			5,400,000
B26	Local		Hornaday Road / Chimney Rock Road Connector	Hornaday Rd. to Chimney Rock Rd. (not open to traffic in '05; refer to 2014 for the remainder)	1.0	N/A	3 lane	Local	No	No	Yes		Revised	1,500,000
B32	Local		East Market Street	Streetscape and Traffic Management (refer to 2014 for the remainder)	1.5	6 lane divided	4 lane divided	Principal Arterial	No	Yes	Yes		New	4,500,000

Table 12.7 — Roadway Projects 2014 Horizon Year

2005-2014														
ID	Funding	TIP#	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New/Revised Since Last Plan	Estimated Project Cost
B1	Local		New Garden Road	Existing widening to Brassfield Rd.	1.0	2 lane	4-5 lane	Minor Arterial	No	No	Yes			3,700,000
B2	Local		Friendly Avenue	Westridge Rd. to Holden Rd., add medians & LT lanes (refer to 2004 for the remainder)	1.4	4 lane	4-5 lane	Minor Arterial	No	No	Yes			1,579,035
B3	Local		Creek Ridge Road	Randleman Rd. to US 220 (refer to 2004 for the remainder)	1.2	2 lane	3 lane	Collector	No	No	Yes			2,134,990
B4	Local		Franklin Boulevard / Florida Street Connector	McConnell Rd. to Lee St.	0.6	2 lane	3-4 w/ median	Collector	No	No	Yes		Revised	4,718,640
B5	Local		Elm-Eugene Street	Vandalia Rd. to Southern Urban Loop (I-85 Bypass) (refer to 2004 for the remainder)	0.8	2 lane	5 lane	Minor Arterial	No	No	Yes		Revised	1,570,000
B6	Federal	R-2309	US 220	Horsepen Creek Rd. to US 220 - NC 68 Connector	6.3	2 lane	4-5 lane	Principal Arterial	Yes	No	Yes			22,500,000
B7	Local		Mackay Road	High Point Rd. to Adams Farm Pkwy.	0.5	2 lane	5 lane	Collector	No	No	Yes			1,500,000
B8	Local		Battleground Avenue	Cotswold Ave. to Westridge Rd.	1.3	5 lane	6-7 lane	Principal Arterial	Yes	No	Yes			3,000,000
B9	Local		Stanley Road	Koger Blvd. to Hilltop Rd.	1.1	2 lane	5 lane	Collector	No	No	Yes			2,400,000
B10	Local		Church Street	Cone Blvd. to Northwood St.	1.5	3 lane	5 lane	Collector	No	No	Yes			1,900,000
B11	Local		Horsepen Creek - Fleming Connector	Horse Pen Creek Rd. to Fleming Rd. (includes extending existing x-sections) (refer to 2004 for the remainder)	0.7	N/A	3 lane	Collector	No	No	Yes		Revised	12,738,075
B12	Local		Vandalia Road	Elm-Eugene St. to Pleasant Garden Rd.	1.0	2 lane	5 lane	Minor Arterial	No	No	Yes			3,000,000
B13	Local		Summit Avenue	McKnight Mill Rd. to Brightwood School Rd.	2.3	2 lane	4-5 lane	Minor Arterial	No	No	Yes		X-sect	3,900,000
B14	Local		Summit Avenue	Bryan Park to Eckerson Rd.	0.8	2 lane	4-5 lane	Minor Arterial	No	No	Yes		X-sect	772,727
B15	Federal	R-2611	West Market St.	NC 68 to Bunker Hill Rd. in Colfax	3.6	2 lane	4-5 lane	Major Collector	Yes	No	Yes			15,200,000
B16	Federal	U-4015 (part)	Gallimore Dairy Road	NC 68 to I-40 (refer to 2004 for more; remainder of the project is located out of area)	1.0	2 lane	5 lane	Collector	No	No	Yes			7,837,500
B17	Federal	U-2524 (part)	Western Urban Loop	I-85 to Lawndale Dr. (refer to 2004 for the remainder)	15.0	N/A	6 lane freeway	Interstate	Yes	No				247,800,000
B18	Federal	U-2524 (part)	Chimney Rock Road Extension	Existing facility to Old Oak Ridge Rd.	1.3	N/A	2 lane	Local	No	No	Yes		Revised	Included in funding for project B17
B19	Federal	R-2413 (part)	NC 68 / US 220 Connector	Pleasant Ridge Rd. to US 220 + widening to Rockingham Co. line (refer to 2004 for more; remainder of the project is located in Rockingham Co.)	9.8	N/A	4 lane freeway	Interstate	Yes	No	Yes			76,946,000
B20	Local		Merritt Drive	I-40 to High Point Rd.	1.0	3 lane	5 lane	Collector	No	No	Yes			3,460,090
B21	Federal	U-2913 (part)	Guilford College Road	Widening (from Ruffin Rd to new alignment) New alignment (from widening to High Point Rd.) (refer to 2004 for more; remainder of the project is located in High Point)	2.3 1.5	2 lane N/A	4-5 lane 4 lane divided	Minor Arterial Minor Arterial	Yes Yes	No No	Yes Yes			4,785,830
B22	Federal	U-3612 (part)	Hilltop Road	Guilford College Rd. to Adams Farm Pkwy. (refer to 2004 for the remainder)	0.6	2 lane	4-5 lane	Minor Arterial	No	No	Yes			2,350,000
B23	Federal	U-2412 (part)	High Point Road	Hilltop Rd. to Proposed US 311 Bypass (portion in High Point) (remainder of the project lies in High Point)	3.8	3 lane	4-5 lane	Principal Arterial	Yes	No	Yes			25,857,000

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2005-2014														
ID	Funding	TIP#	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New/Revised Since Last Plan	Estimated Project Cost
B24	Federal	U-3313 (part)	Groometown Road	Wiley Davis Rd. to Wayne Rd. (refer to 2004 for the remainder)	1.2	2 lane	4-5 lane	Minor Arterial	No	No	Yes			4,500,000
B25	Federal	U-4006	Bridford Parkway Extension	Wendover Ave. at Hornaday Rd. to Burnt Poplar Rd. at Swing Rd.	1.1	N/A	5 lane	Collector	No	No	Yes			8,905,000
B26	Local		Hornaday Road / Chimney Rock Road Connector	Hornaday Rd. to Chimney Rock Rd. (refer to 2004 for the remainder)	1.0	N/A	3 lane	Local	No	No	Yes		Revised	500,000
B27	Federal	U-2524 (part)	Hornaday Road / Chimney Rock Road Connector	Bridge over Outer Loop	N/A	N/A	N/A	N/A	No	No	Yes		Revised	Included in funding for project B17
B28	Federal		Reedy Fork Service Road	Turner-Smith Rd. Ext. to Reedy Fork Pkwy.	1.4	N/A	5	Local	No	No	Yes		New	9,058,000
B29	Federal		Reedy Fork Parkway	Turner-Smith Rd Ext to Eckerson Rd.	2.2	N/A	3	Local	No	No	Yes		New	12,883,810
B30	Federal		Turner Smith Road Extension	Connect Brown Summit Rd. to Turner Smith Rd.	2.0	N/A	3 lane	Major Collector	No	No	Yes		New	9,060,600
B31	Local		Lake Jeanette Road	Lawndale Ave. to N Elm St. / Bass Chapel Rd.	2.0	2-3 lane	3-5 lane	Local	No	No	Yes		Revised	2,000,000
B32	Local		East Market Street	Streetscape and Traffic Management (refer to 2004 for the remainder)	1.5	6 lane divided	4 lane divided	Principal Arterial	No	Yes	Yes		New	6,330,350
B33	Federal	U-2524 (part)	Lake Brandt / Cotswold Connector	Lake Brandt Rd. to Cotswold Rd.	0.3	3 lane	3 lane	Collector	No	No	Yes		Revised	0
B35	Federal	R-2612 (part)	US 421	Williams Dairy / Neely Rd realignment & interchange; interchange at Hagen Stone Park Connector	1.2	2 lane	3-5 lane	Freeway / Expressway & Collector	Yes	No	Yes	Yes (interchange)	Revised	16,605,000
B36	Federal	R-4707	US 29	Eckerson Rd. / US 29 Interchange + 1 mile of freeway upgrade (Assumes U-2524 includes widening of remaining US 29 south to Urban Loop)	1.0	4 lane freeway	6 lane freeway	Freeway/Expressway	Yes	No	Yes		Revised	16,400,000
B37	Federal	U-4711	Greensboro Signal / ITS System		N/A	N/A	N/A	N/A	No	Yes	No	Yes		15,450,000
B39	Federal		East Cone Boulevard Extension	Nealtown Rd. to Hines Chapel Rd.	2.0	N/A	4 lane divided	Minor Arterial	Yes	No	Yes		X-sect	14,588,375
B40	Federal	U-2815 C	Bryan Boulevard	Inman Rd. to NC 68 (relocate roadway)	1.9	4 lane divided	4 lane divided	Freeway/Expressway	Yes	No	Yes		Revised	11,771,700
B41	Federal		Holts Chapel Road Upgrade	Alignment & X-section improvements, E Market St to Ward Rd	1.6	2 lane	2-3 lane	Collector	No	No	Yes		Revised	13,448,236
B42	Federal		Pegg / Thatcher / Brigham Road Extension	Gallimore Dairy Rd. to Pleasant Ridge Rd. (new & existing, part in High Point)	4.0	N/A	4 lane divided	Collector	No	No	Yes		New	22,610,250
B43	Federal		Bryan Boulevard Extension	NC 68 to Pleasant Ridge Rd.	0.8	N/A	3 lane	Major Collector	No	No	Yes		X-sect, Func Class	4,038,000
B44	Federal		Sandy Ridge Road	I-40 to Market St.	1.0	2 lane	4 lane divided	Major Collector	No	No	Yes			5,529,310
B45	Federal		Alamance Church Road	US 421 to SE of Southeast School Rd.	4.7	2 lane	5 lane	Minor Arterial	Yes	No	Yes		Longer	12,051,284
B46	Local	U-4015 (part)	Gallimore Dairy Road	I-40 to Market St.	0.6	2 lane	5 lane	Collector	No	No	Yes			2,000,000
B47	Local		Hilltop Road	Widen from Adams Farm Pkwy to Stanley Rd.	1.3	2 lane	5 lane	Minor Arterial	No	No	Yes			721,335

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2005-2014														
ID	Funding	TIP#	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New/Revised Since Last Plan	Estimated Project Cost
Projects not completed in 2014														
C1	Federal	R-2577 (part)	US 158	Forsyth Co. Line to US-220 (in conjunction w/ Bypass) (refer to 2020 for more; remainder of the project lies in Forsyth and Rockingham Cos.)	4.6	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes		Revised	2,000,000
C7	Federal	U-2525 (part)	Eastern Urban Loop	Lawndale Dr. to US 70 (refer to 2020 for the remainder)	13.0	N/A	6 lane freeway	Interstate	Yes	No	Yes			94,450,000
Total:													\$734,551,137	

Table 12.8 — Roadway Projects 2020 Horizon Year

2015-2020														
ID	Funding	TIP#	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New/Revised Since Last Plan	Estimated Project Cost
C1	Federal	R-2577 (part)	US 158	Forsyth Co. Line to US-220 (in conjunction w/ Bypass) (refer to 2014 for more; remainder of the project lies in Forsyth and Rockingham Cos.)	4.6	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes		Revised	28,080,000
C2	Federal	R-2910 (part)	US 70	Rock Creek Dairy Rd. to Alamance County Line (.3 to MAB) (remainder of the project lies in Alamance Co.)	0.3	2 lane	5 lane	Major Collector	Yes	No	Yes			2,869,000
C3	Federal	U-2581	US 70	Mt Hope Church Rd. to Rock Creek Dairy Rd.	5.2	2 lane	5 lane	Minor Arterial	Yes	No	Yes			12,200,000
C4	Federal		Fleming Road / Lewiston Road	Fleming Rd. to Lewiston Rd. connection and interchange at Urban Loop	0.6	N/A	4-5 lane	Freeway / Expressway & Minor Arterial	Yes	No	Yes		X-section	11,140,530
C5	Federal		Horsepen Creek Road	New Garden Rd. to Battleground Ave.	3.4	2 lane	4-5 lane	Collector	No	No	Yes		X-section	16,816,570
C6	Federal		Summit Avenue	Brightwood School Rd. to Bryan Park	2.6	2 lane	3-5 lane	Minor Arterial	No	No	Yes			2,327,272
C7	Federal	U-2525 (part)	Eastern Urban Loop	Lawndale Dr. to US 70 (refer to 2014 for the remainder of the project)	13.0	N/A	6 lane freeway	Interstate	Yes	No	Yes			77,850,000
C8	Federal		E Cone Blvd / Urban Loop Interchange	Interchange with East Cone Blvd. and Urban Loop	N/A	N/A	N/A	Interstate	Yes	No	Yes			7,590,000
C9	Federal		I-40 / NC 68 / I-73 Connector	Old Oakridge Rd. to I-40 & widen existing Bryan Blvd. to Urban Loop	7.6	N/A	4-6 lane freeway	Interstate	Yes	No	Yes		Revised	67,827,750
C10	Federal		NC 150 Realignment	New location, from Brookbank Road to US 220 (see C20 for remainder)	1.9	N/A	2 lane	Major Collector	No	No	Yes		Revised	8,204,466
C11	Federal		Hicone Road Extension	Lee's Chapel Rd. to Summit Ave.	0.8	N/A	3 lane	Minor Arterial	No	No	Yes			3,203,303
C12	Federal		Carmon / McLeansville Road Connector	Knox Rd. to McLeansville Rd.	1.1	N/A	2 lane	Collector	No	No	Yes		New	7,816,351
C13	Federal		Gallimore Dairy Road / Friendly Avenue	Realign for continuity	0.2	5 lane	5 lane	Minor Arterial	No	No	Yes			1,821,630
C14	Federal		Ritters Lake Road Realignment	Connect with Wolfetrail at Randleman Rd.	0.4	2 lane	3 lane	Minor Arterial	No	No	Yes		New	1,928,430
C15	Federal		Sandy Ridge Road Extension	Market St. to Airport Connector and interchange at Market St.	1.0	N/A	4 lane divided	Major Collector	Yes	No	Yes		Revised	17,059,100
C17	Federal		Lewiston / Pleasant Ridge Roads	Urban Loop to Realigned NC 150	5.0	2 lane	5 lane	Major Collector	Yes	No	Yes		Revised	24,164,250
C18	Federal		Vandalia Road Extension	Pleasant Garden Rd. to Alamance Church Rd. & US 421 interchange	2.7	N/A	3 lane	Freeway / Expressway & Minor Arterial	Yes	No	Yes			12,812,863
C19	Federal		South Holden Road	Old Randleman Rd. to existing widening	1.9	2 lane	4-5 lane	Minor Collector	No	No	Yes		New	8,504,998
C20	Federal		NC 150 Realignment / Widening	On existing Brookbank Road and existing Auburn Road from NC 68 Lake Brandt Road (see C10 for remainder)	7.5	2 lane	3 lane	Major Collector	No	No	Yes		New	18,952,000
C21	Federal		Pleasant Ridge Road	Market St. to Lewiston Rd.	8.0	2 lane	3 lane	Major Collector	No	No	Yes		Revised	20,457,000

TOTAL: \$351,625,513



Table 12.9 — Roadway Projects 2030 Horizon Year

2021-2030														
ID	Funding	TIP#	Facility	Description / Extents	Length (miles)	Existing # Lanes	Horizon Year # Lanes	Federal Functional Class	Regionally Significant?	Exempt?	Reflected in Network Coding?	CMAQ	New/Revised Since Last Plan	Estimated Project Cost
D1	Federal	R-2580 (part)	US 158	US 220 - Rockingham Co Line (remainder of the project lies in Rockingham Co.)	1.5	2 lane	4-5 lane	Minor Arterial	Yes	No	Yes		Revised	7,600,000
D2	Federal		US 29	New SPUI (@ Brown Summit / Turner Smith Connector	N/A	N/A	N/A	Interstate	Yes	No	Yes		New	24,461,455
D3	Federal		Penry / Ward / Youngs Mill Connector	McConnell Rd. to Huffine Mill Rd. (realign & improve existing)	3.1	2 lane	3 lane	Major Collector	Yes	No	Yes		New	11,435,435
D4	Local		Franklin Road	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			10,000,000
D5	Local		Ward Road	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			12,000,000
D6	Local		Mackay Road	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			15,000,000
D7	Local		Hilltop Road	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			15,000,000
D8	Local		Aycock Street	Railroad underpass replacement (in conjunction with PART)	N/A	N/A	N/A	N/A	No	Yes	N/A			11,000,000
D9	Local		East Market Street	Railroad underpass replacement (in conjunction with PART)	N/A	N/A	N/A	N/A	No	Yes	N/A			30,000,000
D10	Federal		Rankin Mill / Flemingfield Connector	South of Keeley Rd. Huffine Mill Rd.	0.7	2 lane	3 lane	Collector	No	No	Yes		New	4,017,250
D11	Federal		High Rock Road Extension	US 70 to Frienden Church Rd. (connect & improve existing facilities)	5.5	2 lane	2 lane	Collector	No	No	Yes		New	13,695,200
D12	Federal		Wades Store Road Extension	Mt. Hope Church Rd. to Alamance Church Rd.	1.7	2 lane	2 lane	Local	No	No	Yes		New	5,541,900
D14	Federal	R-2612 (part)	Burnetts Chapel / Steeple Chase / Hagen Stone Park Connector	Burnetts Chapel Rd. to Company Mill Rd., new & existing + US 421 interchange	5.2	2 lane	2 lane	Freeway/Expressway & Collector	Yes	No	Yes	Yes (interchange)	Revised	7,754,350
D15	Federal		Airport Connector	Sandy Ridge Rd. Ext. (at I-73 Connector) to Forsyth Co. (continues to Winston-Salem Urban Loop / I-74)	3.7	N/A	4 lane freeway	Freeway/Expressway	Yes	No	Yes		Revised	35,141,250
D17	Federal		Youngs Mill / Southeast School Connector	Millpoint Rd. to Southeast School Rd.	1.2	N/A	2 lane	Minor Arterial	Yes	No	Yes			3,737,400
D18	Federal		US 29	Widen & upgrade to interstate, N of Reedy Creek to Rockingham Co. line	5.5	4 lane freeway	6 lane freeway	Interstate	Yes	No	Yes			22,373,250
D19	Federal		South Dudley Street	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			10,000,000
D20	Federal		South English Street	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			12,000,000
D21	Federal		Colony Road	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			7,000,000
D22	Federal		Tate Street	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	N/A			10,000,000
D23	Federal		Benbow Road	Railroad grade separation	N/A	N/A	N/A	N/A	No	Yes	Yes		New	7,000,000
D24	Federal		Nealtown Road / McKnight Mill Road Connector and Extension	Huffine Mill Rd. to Eckerson Rd. (connect & improve existing facilities)	4.0	2 lane	2-3 lane	Major Collector	No	No	Yes		New	38,944,861
D25	Federal		Knox Road Extension	Carmon to Frieden Church Rd., w/ RR grade separation	0.3	N/A	2 lane	Collector	No	No	Yes		New	8,022,406
D27	Federal		Williams Dairy / Millpoint Road Connector	Millpoint Rd. to Williams Dairy Rd.	0.6	N/A	2 lane	Collector	No	No	Yes			4,925,656
D28	Federal		Bishops Road - Ritters Lake Road Connector	S. Holden Rd. (Drummond Rd.) to Wolfetrail Rd. (Old Randleman Rd.)	0.8	2 lane	3 lane	Collector	No	No	Yes		New	3,903,000
D29	Federal		Florida Street Extension	Franklin Blvd. Ext. to McLeansville Rd. (new & improve existing)	4.0	N/A	4 lane divided	Major Collector	Yes	No	Yes		New	21,890,150
D30	Federal		Hicone Road Widening	US 29 to Hines Chapel Rd.	3.3	2 lane	5 lane	Minor Arterial	No	No	Yes		New	17,346,300

TOTAL: \$369,789,863

Non-capacity roadway projects listed in the MTIP also were included in the roadway costs for each horizon year. Those projects include intersection safety, bridges, rail crossing and passenger rail, ITS, and safety improvements. These projects are not included in the transportation modeling analyses because they are non-capacity improvement projects and because their effect on the transportation system generally cannot be modeled using the regional travel demand model.

**Table 12.10** summarizes the non-capacity roadway categories by horizon year. No projects are noted beyond 2014 because the TIP does not identify this type of improvement so far out. Such projects are generally anticipated by the plan and will be identified in future Transportation Improvement Programs and local programs. The 2020 and 2030 horizon years do not have projects listed because these years are not accounted for in the TIP.

**Table 12.10 — Non-Capacity Roadway Project Summary**

<b>Non-Capacity Roadway Projects</b>	
<b>2004</b>	
Pavement and Bridge Rehab & Safety Improvements	\$335,000
Bridge Projects	\$27,132,000
Intersection Safety Projects	\$1,495,720
Railroad Improvements	\$3,463,280
<b>Total:</b>	<b>\$32,426,000</b>
<b>2014</b>	
Pavement and Bridge Rehab, Interstate Lighting & ITS Improvements	\$44,196,000
Bridge Projects	\$21,380,000
Intersection Safety Projects	\$998,290
Railroad Improvements	\$8,115,120
<b>Total:</b>	<b>\$74,689,410</b>

### **Transit Capital Costs**

Transit capital costs are based on the 2004-2010 Metropolitan Transportation Improvement Program, the Mobility Greensboro report, and consultation with GTA and PART. These costs include fleet expansion and replacement as well as general system improvements. **Table 12.11** shows transit capital costs by horizon year and type, as well as the source of the itemized costs.

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**Table 12.11 — Estimated GTA Transit Costs**

<b>Estimated Capital Costs</b>	
<b>2004</b>	
8 expansion buses (TIP)	\$2,600,000
8 replacement small buses (TIP)	\$511,000
Park-and-ride lots (unfunded TIP)	\$564,000
Dispatch scheduling software (TIP)	\$100,000
Routine capital (TIP)	\$372,000
Preventive maintenance (TIP)	\$2,502,000
<b>Total:</b>	<b>\$6,649,000</b>
<b>2005-2014</b>	
6 expansion buses (TIP, STP-DA allocation)	\$1,950,000
8 replacement buses (unfunded TIP)	\$2,600,000
7 replacement buses (non-TIP)	\$2,275,000
33 expansion buses (non-TIP)	\$10,725,000
9 expansion small buses (TIP)	\$576,450
19 expansion small buses (non-TIP)	\$1,216,950
34 replacement small buses (TIP)	\$2,177,700
AVL system (unfunded TIP)	\$700,000
2 transit hubs (TIP)	\$200,000
GTA facility improvements (TIP)	\$125,000
Preventive maintenance (portion TIP, portion non-TIP)	\$7,316,528
Routine capital costs (portion TIP, portion non-TIP)	\$2,614,764
<b>Total:</b>	<b>\$32,477,392</b>
<b>2015-2020</b>	
6 replacement buses (non-TIP)	\$1,950,000
18 replacement small buses (non-TIP)	\$1,152,900
Preventive maintenance (non-TIP)	\$3,639,792
Routine capital costs (non-TIP)	\$1,571,646
<b>Total:</b>	<b>\$8,314,338</b>
<b>2021-2030</b>	
10 replacement buses (non-TIP)	\$3,250,000
27 replacement small buses (non-TIP)	\$1,729,350
Preventive maintenance (non-TIP)	\$6,066,320
Routine capital costs (non-TIP)	\$2,619,410
<b>Total:</b>	<b>\$13,665,080</b>
<b>Grand Total:</b>	<b>\$61,105,810</b>
Note: TIP denotes projects listed in the current Public Transportation MTIP. Non-TIP denotes projects not listed in the current Public Transportation MTIP.	

**Table 12.2** includes capital costs for the PART Express bus system, serving the Piedmont Triad area. PART staff provided the annual capital costs and fleet modifications for 2004-2006, adjusted to reflect only the percentage of costs incurred in the Greensboro Metropolitan Area. A conservative fleet expansion of one bus per year was assumed from 2007 until 2030. Capital



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costs associated with the construction of an intermodal transportation facility were included in the 2015-2020 horizon year period to coincide with the projected opening of the first phase of the PART regional rail line.

**Table 12.12 — Estimated PART Express Bus Costs**

<b>PART Express Bus Transit Capital Costs</b>	
<b>2004</b>	
11 replacement buses (7 large, 4 small)	\$2,644,231
2 expansion buses (2 small)	\$480,769
<b>Total:</b>	<b>\$3,125,000</b>
<b>Total for Greensboro Metro Area:</b>	<b>\$1,312,500</b>
<b>2005-2014</b>	
3 expansion buses (05-06)	\$721,154
8 expansion buses (07-14)	\$1,923,077
8 replacement buses (07-14)	\$1,923,077
<b>Total:</b>	<b>\$4,567,308</b>
<b>Total for Greensboro Metro Area:</b>	<b>\$1,918,269</b>
<b>2015-2020</b>	
6 expansion buses	\$1,442,308
6 replacement buses	\$1,442,308
Intermodal transportation center	\$11,500,000
<b>Total:</b>	<b>\$14,384,615</b>
<b>Total for Greensboro Metro Area:</b>	<b>\$6,041,538</b>
<b>2021-2030</b>	
10 expansion buses	\$2,403,846
10 replacement buses	\$2,403,846
<b>Total:</b>	<b>\$4,807,692</b>
<b>Total for Greensboro Metro Area:</b>	<b>\$2,019,231</b>
<b>Grand Total for Greensboro Metro Area:</b>	<b>\$11,291,538</b>

Assumptions for the PART Express bus transit capital costs include the following:

- Current fleet size is 11 (7 large, 4 small)
- 2004: 13 buses will be added, 11 as replacement, 2 as expansion — 7 will be large buses, 6 will be small
- Total funding is \$3,125,000 and is split 80% federal/10% state/10% local (PART)
- PER BUS COST (assumed same for large and small buses): \$240,384.62
- 2014: NCDOT is spending \$1 million on 3 expansion vehicles (assume all large) in the next year or two (assume in 2005-2006)
- Assume the cost is equal to three times the 2004 per bus cost

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- After this, assume a 1 bus per year replacement and a 1 bus per year expansion rate
- 2020: \$11.5 million of federal, state, and local funding (80%/10%/10% split) for an intermodal transportation center has been allocated to accommodate express bus and rail service
- Assume a 1 bus per year replacement and a 1 bus per year expansion rate
- 2030: Assume a 1 bus per year replacement and a 1 bus per year expansion rate

\*\*All horizon years have had costs reduced to 42% of total to reflect portion used by service in Greensboro Urban Area

Costs for the first phase of the PART regional rail system are presented in **Table 12.2**. The total capital cost of this line was obtained from the Triad Major Investment Study Preliminary Draft Report. PART staff officials provided the anticipated years of construction of the line (2009-2017). To obtain the annual capital costs, the total cost was divided by the number of years in each horizon period during which the system would be under construction.

**Table 12.13 — Estimated PART Rail Costs**

PART Rail Costs	
2004	0
2014	61,537,733
2020	30,768,867
2030	0
<b>Total:</b>	<b>92,306,600</b>

PART rail costs included the following assumptions:

- No capital costs are assumed for 2004 because construction has not yet begun
- No capital costs are assumed for 2030 because the line is expected to become operational in 2017
- Since construction is expected to last from 2009-2017, the capital costs are divided up based on the number of years in each horizon with capital costs (6 years in 2014, 3 years in 2020)

### Capital Costs for Non-Motorized Transportation

The recommended investments for the bicycle and pedestrian element are based on 1) the current construction programs of the City of Greensboro, Guilford County, and the NCDOT; and 2) estimates of future funding levels based largely on these programs.

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It is anticipated that more extensive improvements will be needed by 2030, but additional, more detailed work will be needed to develop a long term plan of action for this.

The LRTP assumes the continuation of an aggressive program by the City of Greensboro to retrofit existing roadways with sidewalks. It also assumes a continuation of the City's sidewalk petition program on residential streets at current levels. The LRTP also assumes continued implementation of the City and County Trail System.

The LRTP assumes sidewalks are included in all City of Greensboro roadway projects, as well as in NCDOT roadway improvement projects within the urban area. Additionally bicycle accommodations (bike lanes or wide outside shoulders) are planned for certain roadway projects. These costs are factored into the roadway cost estimates.

Bicycle and pedestrian facility capital costs and revenues were forecasted based on the assumption that currently planned funding levels will be maintained and certain additional revenue sources will become available.

The 2004-2010 MTIP includes six enhancement projects for bicycle and pedestrian facilities. The 2003-2009 CIP has designated general obligation bonds and an annual \$100,000 allocation from the street and sidewalk fund to be used for sidewalk construction projects. \$1,000,000 from the Powell Bill is allocated annually for sidewalk improvement. Finally, Surface Transportation Plan Direct Allocation (STP-DA) funds are apportioned annually starting in 2007.

The City of Greensboro plans to construct 20 miles of trail by 2017 at a total cost of \$8 million, and an additional 20 miles at a cost of \$12 million by 2030. Guilford County's Greenway Plan calls for \$1 million annually to be spent on greenways. Additionally, two one-time funding amounts will be allocated for construction of the Triad Greenway. **Table 12.14** shows the funding sources and amounts available for each horizon year.

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**Table 12.14** — Estimated Bicycle and Pedestrian Costs and Revenues

<b>Bicycle and Pedestrian Funding</b>					
		<b>2004</b>	<b>2014</b>	<b>2020</b>	<b>2030</b>
<b>Sidewalk Construction</b>	Authorized Bonds	300,000	1,251,810	0	0
	Street and Sidewalk Fund	100,000	1,000,000	600,000	1,000,000
	Powell Bill Funds	1,000,000	10,000,000	6,000,000	10,000,000
	TIP Enhancement Projects	75,000	477,000	0	0
	STP-DA Projects	0	7,541,000	6,000,000	10,000,000
	Committed Projects	1,756,057	1,694,900	0	0
<b>Future Trail Construction</b>	City	571,429	7,014,286	4,483,516	9,230,769
	County	1,000,000	10,000,000	6,000,000	10,000,000
	Triad Greenway	0	3,700,000	3,700,000	0
<b>Totals</b>		<b>4,802,486</b>	<b>42,678,996</b>	<b>26,783,516</b>	<b>40,230,769</b>

## Maintenance Cost Assumptions

Maintenance costs are divided into state roads, local roads, and transit. On-road bicycle and pedestrian facility maintenance is reflected as a part of state and local road maintenance.

### State Road Maintenance Costs

State road maintenance costs are based on historical NCDOT funding from 1990 to 2002 in Guilford County. The historical values were converted to 2004 dollars so the average annual rate of increase in costs could be obtained. These costs reflected a 7% annual rate of increase. However, a more conservative 5% growth factor was applied to forecast costs through 2030.

### Local Road Maintenance Costs

Local road maintenance costs are covered through Powell Bill funds. Historical Powell Bill funds for 1990-2003 were obtained from NCDOT and converted to 2004 dollars for comparison. The average annual increase was found to be 0.79%. This rate was applied to forecast Powell Bill funds through 2030.

### Transit Operations and Maintenance Costs

Historic GTA operations and maintenance costs were obtained from GDOT for 1998-2004 (costs were projected for 2004). Based on the transit fleet size for the years 2002-2004, the average operations and maintenance costs were found for large buses in

the fleet. The number of buses was projected to increase from 36 in 2004 to 75 in 2014 according to the Mobility Greensboro plan. As a result, the operations and maintenance for each year up to 2030 was forecasted based on the projected fleet size for that year and the per bus cost. Personnel and benefit costs also were projected and added to the operations and maintenance costs.

PART rail operations and maintenance costs were obtained from the Triad Major Investment Study Preliminary Draft Report. According to PART officials, the first phase of the regional rail line is expected to become operational in 2017 (2020 network year). Annual operations and maintenance costs are assumed for the years 2020 to 2030.

PART staff provided the current operations and maintenance costs for express bus service along with the current fleet size, adjusted to reflect only the percentage used for service in the Greensboro Urban Area. From this information, an operations and maintenance cost was found for each bus in the fleet. Based on the projected fleet expansion, this per bus cost was then used to find the annual operations and maintenance costs.

## **Future Revenue Needs**

The LRTP finds that GTA's service expansion plans appear reasonable, and can reasonably be funded in the timeframe noted in the plan. Actual timing of GTA's service expansion plans will depend on the availability of additional revenue sources. Revenue availability will depend in part on the results of implementation discussions that will unfold over the short to mid-term. Assuming the Mobility Greensboro Improvements are made by 2014, additional service enhancements could be expected by 2020 and 2030. However, these have not been identified in the 2030 LRTP update pending further technical assessments about what form these enhancements might take. Additional revenues sources needed to implement this plan are outlined in Mobility Greensboro.

The LRTP also finds that PART's plans appear reasonable, and can reasonably be expected to be funded in the timeframe noted in the plan. Actual implementation and timing will depend on 1) revenue availability; and 2) approval of plans by regulatory and funding agencies including the Federal Transit Administration. Discussions of revenue needs and availability will unfold in the next few years, as will PART's project development efforts.

Additional regional and local revenue sources may be needed in the future to support roadway investment as well. The financial plan assumes some future revenue sources will be in place to fund a portion of the projects listed. For instance, projected STP-DA

funds are being allocated for transit capital facilities in 2005 and again in 2012-2020. Despite the fact that all projects (i.e., highway, transit, rail, bicycle, and pedestrian) in the transportation plan have revenues currently assigned to cover them over the 2030 horizon year, the need for additional funding sources must continually be evaluated, identified, and pursued to insure funding for future projects. Grant monies and authorized general obligation bonds are currently being applied to certain projects in the plan. These funds as well as other opportunities must continue to be aggressively pursued in order to provide for adequate financial support for future transportation projects.